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09/668,396	09/22/2000	Jacek Stachurski	TI-29493	2375

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EXAMINER

NOLAN, DANIEL A

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 7

Application Number: 09/668,396
Filing Date: September 22, 2000
Appellant(s): STACHURSKI ET AL.

Carlton H. HoelA statement identifying the real party in interest is contained in
the brief.

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 30 December 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is deficient because the attributes ascribed to figure 6b (in the last sentence) are not discernable in that figure.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-4 stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,233,550	<u>Gersho et al</u>	05-2001
6,377,916	<u>Honda et al</u>	09-1989
4,230,906	<u>Davis</u>	10-1980

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-6 are rejected under 35 U.S.C. 103(a). This rejection is set forth in prior Office Action, Paper No. 4, as follows:

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(Note that this application has been included in **Art Unit 2654**, and that this AU number should be used in all future correspondence.)

Response to Amendment

2. The response filed 17 March was entered to the following effect:
 - The changes to the specification were applied as indicated, and the addressed objections are withdrawn.

Response to Arguments

3. Applicant's arguments filed 17 March 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) And *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, In this case, the phase discontinuity of Gersho is replaced with the phase equalization of Honda as indicated (in column 3 line 45) to minimize distortion. The Examiner has expanded the rejection to separately indicate the specific elements of the features.

Specification

4. The abstract of the disclosure is objected to because the sentences are not complete. Correction is required. See MPEP § 608.01(b).

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as

- The single-letter-word "a" must be removed from the 2nd line of the correction to page 3 (1st paragraph on page 3 of the response).

Appropriate correction is required.

Claim Objections

6. Claim 3 is objected to because:

- Two features of claim 3 are labeled (c).
- The Examiner is proceeding with the understanding that the last should be (d).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2654

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Gersho et al & Honda et al

8. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gersho et al (U.S. Patent 6,233,550) in view of Honda et al (U.S. Patent 6,377,916).

9. Regarding claims 1 and 4 as understood by the Examiner, the *Hybrid Coding of Gersho et al* reads on the features of the immediate application as follows:

- Gersho et al (with the title) reads on the feature in the preamble, of a *hybrid speech encoder having a linear prediction (14 in figure 4A), pitch and voicing data (18, 44 & 46 in figure 4A) but is silent that the combination includes a zero-phase equalization filter*. Honda et al (column 1 lines 20-27) reads on the feature that the combination of a *linear prediction, pitch and, voicing analyzer includes a zero-phase equalization filter* (column 3 lines 27-33).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al so as to process all parameters

of speech without the complexities of alternatively associating low bit-rate waveform segments.

- Gersho et al (column 4 lines 5-15) reads on the feature particular to claim 4, of *(b) a parametric encoder coupled to the analyzer (termed vocoder).*
- Gersho et al (claim 1 lines 62-63) reads on the features of a *waveform encoder coupled to the analyzer.*
- Where Gersho et al does not mention a *zero-phase equalization filter*, Honda et al (column 3 lines 27-33) reads on the feature where the *waveform encoder includes a zero-phase equalization filter.*

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al so as to reduce spectral distortion.

10. Regarding claim 2 as understood by the Examiner, the claim is set forth with the same limits as claim 1. Where Gersho et al does not mention a *zero-phase equalization filter*, Honda et al (column 3 lines 22-23) reads on feature *(e) said zero-phase equalization filter has coefficients determined by said analyzer* which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al to have the coded pitch position match the source impulse.

Gersho et al, Honda et al & Davis

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gersho et al in view of Honda et al and further in view of Davis (U.S. Patent 4230906).

12. Regarding claim 3 as understood by the Examiner, the *Hybrid Coding* of Gersho et al reads on the features of the immediate application as follows:

- Gersho et al (in the title) reads on the feature, of a *hybrid speech encoder*.
- While Gersho et al does not explicitly disclose the combination, Honda et al (column 1 lines 20-27) reads on feature (a) *a linear prediction, pitch and, voicing analyzer*.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al to the device/method of Gersho et al so as to process all parameters of speech without the complexities of associating segments.

- Gersho et al (column 4 lines 5-15) reads on the feature particular to claim 4, of (b) *a parametric encoder coupled to the analyzer (termed vocoder)*.
- Gersho et al (claim 1 lines 62-63) reads on the features of a *waveform encoder coupled to the analyzer*.
- Where Gersho et al does not mention a *zero-phase equalization filter*, Honda et al (column 3 lines 27-33) reads on the feature where the *waveform encoder includes a zero-phase equalization filter*.

- Where Gersho et al associates voice with *strongly- and weakly-periodic voiced frames*, which would be subject to interpretation with regard to the features of this claim, with *parametric decoders*, Davis (column 7 lines 18-27) reads on the feature that *decodes zero-phase equalized weakly-voiced frames time-synchronized* ("15" figure 1 & figure 8H) *with parametric decoder decoded strongly-voiced frames*.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Honda et al and Davis to the device/method of Gersho et al so as to reduce spectral distortion to characterize signals for different strategies in order to avoid misadjusting an extreme segment that could have been legitimate according to other processing perspectives.

(11) Response to Argument

With regard to the argument concerning the citing of Gersho et al in view of Honda et al (page 3 line10-13), Appellant acknowledge that Gersho et al "*already accounts for the phase discontinuity arising from switching between waveform and harmonic coders*". Only because Gersho et al did not describe the phase discontinuity in the same terms as used for the claimed "*phase equalization*" was Honda et al cited as reference to provide the necessary language, describing and reinforcing the teaching of Gersho et al that would lead one to the "*phase equalization*" feature of the claim.


Art Unit: 2654

In response to applicant's argument that Honda et al would not apply in this case because it is not "*hybrid coding*" (page 3 line 13), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Daniel A. Nolan
Examiner
Art Unit 2654

dan/DAN
February 19, 2004

Conferees:
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